

FLUID PRODUCT DISPENSER

This invention relates to a fluid product dispenser like that that might be encountered in the perfume, cosmetics or pharmaceutical industries to dispense fluid, liquid or even powder products. This invention is particularly but not exclusively applicable to small capacity dispensers that are particularly appropriate for providing samples.

In general, this type of dispenser comprises a fluid product reservoir with a capacity of up to several hundred millilitres for a dispenser to be sold in stores, less than or up to five millilitres for some dispensers and particularly samples to be distributed for free.

Apart from the reservoir, the dispenser may also include a dispensing device that may be in a very wide variety of shapes such as a permanent opening, a stopper with stop valve, a pad applicator, a rotating ball system, etc. The dispensing device may also be in the form of a pump designed to withdraw fluid product from the reservoir and dispense it each time the pump is activated. The pump may be provided with a

dispensing head in the form of a pusher forming a dispensing orifice that may be in the form of an atomiser. The pump may be fixed directly in the reservoir without any intermediate part, or as a
5 variant the pump may be fixed in the reservoir using an attachment ring. Furthermore, the dispenser may include a cap above the pump, or more particularly the dispensing head of the pump.

This is a conventional design for a dispenser of a
10 fluid product such as perfume, a lotion, cream, gel, etc. As mentioned above, the capacities of the reservoir may vary from a large model to a sample. Even in the case of a sample, the dispenser may be provided with a pump, and obviously another type of dispensing
15 device.

In general, the dispenser comprises an outer surface formed by the reservoir or the cap acting as a surface on which information can be added. This information may be of various natures, for example such
20 as a décor, a logo, the product brand and / or the name of the company manufacturing the product, legible information about the capacity of the reservoir, the composition of the fluid product, its use, etc.

There are several techniques for marking this
25 information on the dispenser, and more particularly on its reservoir and possibly on its cap. A first technique consists of silk screen printing the information directly on the outer surface formed by the dispenser. Thus, the information is applied directly on
30 the material from which the dispenser is formed. This is a relatively expensive technique that is

particularly adapted to the large and medium capacity models sold in the shops. Another marking technique consists of printing information by pad printing directly on the outside surface of the dispenser. A
5 third so-called "hot marking" technique consists of transferring information initially placed on a sheet onto the outer surface by the application of heat. These pad printing and hot marking techniques are also relatively expensive and are more particularly suitable
10 for a medium and large capacity dispenser. A fourth application technique consists of printing information on a label that is subsequently glued onto the outside surface of the dispenser. This is the least expensive but also the least aesthetic technique.

15 Silk screen printing, pad printing and hot marking techniques provide a method of concealing the dispenser only at the location of the information. The remainder of the outside surface of the dispenser remains uncovered and is thus perfectly visible and clear. On
20 the other hand with the labelling technique, most of the outer surface of the dispenser is covered and therefore is not visible.

 In the special case of samples, a constant and very understandable target requirement is to produce
25 the sample with the lowest possible cost, considering that it will be distributed free. Thus logically, the labelling technique should be preferred. However, it is not particularly aesthetic, to the extent that the result is unattractive. Consequently, printing
30 techniques (silk screen printing, pad printing, hot

marking, etc.) are also used for samples despite the relatively high cost.

This invention attempts to overcome this problem according to prior art, particularly but not
5 exclusively related to the sample dispenser, by defining a relatively inexpensive information marking technique that is easy to implement and to use on all types of dispensers, but particularly in samples.

To achieve this purpose, this invention proposes a
10 fluid product dispenser comprising a visible outer surface that is at least partially covered with a substrate on which visual information is added, the substrate being transparent, thus allowing the outside surface to be seen through the said substrate as if it
15 were uncovered, except at the level of the visual information that at least partially masks the outside surface, the transparent substrate including a back face and a front face, the back face being provided with an adhesive in contact with the outer surface,
20 characterised in that it comprises a reservoir and a pump mounted on the fluid product reservoir, the reservoir forming at least part of the visible outer surface. As mentioned above, such a transparent substrate is particularly advantageous for a sample
25 type dispenser, but it may also be used with all types of dispensers with a very wide variety of reservoir capacities.

Advantageously, the information is marked on the front face.

30 However, the information may also be marked on the back face of the substrate.

According to another characteristic, the dispenser comprises an at least partially cylindrical section defining the said outer surface.

As a variant, or additionally, the dispenser
5 comprises a fluid product reservoir forming the outer surface.

Advantageously, the reservoir comprises a circular cylindrical body forming the outer surface.

According to another characteristic of the
10 invention, the dispenser may include a removable cap forming the outer surface.

According to one embodiment that resembles a conventional sample dispenser, the dispenser may include a protective cap covering the pump, the cap
15 extending along the prolongation of the reservoir, and the sections and diameters of the cap being substantially identical so that the dispenser has a generally circular cylindrical shape. In this case, the transparent substrate may be equally applied onto the
20 reservoir or onto the cap.

According to another characteristic of the invention, the outer surface may be made of plastic. Obviously, other constituent materials such as glass or metal may be used.

25 Advantageously, the dispenser may include a reservoir with a capacity of less than five millilitres. This is a typical content for a sample dispenser.

The invention will now be described in more detail
30 with reference to the appended figures given as a non-limitative example of an embodiment of the invention.

In the Figures:

Figure 1 is a slightly perspective top view of a fluid product dispenser provided with a substrate according to one embodiment of the invention,

5 Figure 2 is a front view of the dispenser in Figure 1,

Figure 3 is a view similar to that in Figure 2 with the removable cap slightly removed,

Figure 4a is a view similar to that in Figure 2
10 for the dispenser in Figures 1 to 3 before being covered with the substrate, and

Figure 4b is a view of the substrate according to the invention set out flat ready to be applied onto the dispenser in Figure 4a.

15 The embodiment shown in the figures and used to illustrate this invention is a sample dispenser for a fluid product that is shown at approximately full scale. This particular type of dispenser, in other words used as a sample, must not be considered as the
20 only possibly embodiment of the invention. The sample dispenser simply forms a preferred embodiment for the reasons mentioned above. The dispenser, denoted as a whole with reference number 1, is associated with or provided with a substrate 2 on which the information 24
25 is given. The dispenser 1 comprises a reservoir 11, a dispensing device in the form of a pump 13, an attachment ring 12 and a removable cap 14. The ring 12 and the cap 14 are optional parts, which are not necessary in some cases. The pump 13 may be mounted
30 directly in the reservoir 11 and the cap 14 may be removed. The dispensing device chosen to illustrate

this invention, namely a pump 13, must not be considered as being the only possible dispensing device within the framework of this invention. A dispenser end piece of the applicator or stopper type may also be
5 used instead of the pump. A simple plug closing off the reservoir may also be used as a dispensing device.

The reservoir 11 comprises a bottom 110, and a body or cylinder 111 including an open end 113 defining an opening through which the fluid product can be put
10 into or taken out of the reservoir. The body 111 comprises a visible outer surface 112. This surface 112 in this case is cylindrical and circular over the entire height of the body 111. However, it would also be possible for the body 111 to be cylindrical but not
15 circular, or even partially cylindrical over only part of its height and its periphery. A non-cylindrical outer surface could also be envisaged, but this complicates manufacturing and use of the invention. The reservoir 11 is preferably made of plastic, but could
20 also be made of glass or metal. It may have a capacity or content of the order of a few millilitres, for example one to ten millilitres, and preferably about two millilitres.

The attachment ring 12 may also be made of a
25 moulded injected plastic material and conventionally comprises a skirt gripping on the inside of the reservoir, reception means to hold the pump 13 in place in the ring, a thrust collar 12 that bears on the upper end edge 113 of the reservoir 11, and optionally a
30 bushing 123 that extends from the collar 121 upwards as can be seen in Figure 3. The function of the ring is to

make a stable attachment of the pump 13 with respect to the reservoir 11. This stable attachment may be made directly by the pump 13 engaging in the reservoir 11. The special shape of the attachment ring is not critical for this invention. However, it can be noted that the outside diameter of the collar 121 is substantially equal to the outside diameter of the body 111 at its outer surface 112 such that the collar 121 extends along the prolongation of the body 111.

The pump 13, which is very partially shown in Figure 3, comprises a pump body gripping inside the ring 12. This pump body comprises an inlet possibly provided with a plunger tube that extends inside the reservoir 11 through which fluid product is drawn off. At the opposite end, the pump body is provided with an actuation rod free to move forwards and backwards on which a distribution head 131 is mounted that in this case is used as an actuation pusher. The user can press onto the pusher to actuate the pump with one finger, preferably the index finger. The pusher is also provided with a dispensing orifice 132 that may be of the atomiser type in some cases. Dispensing in drop form is also possible.

The cap 14 has an upper end surface 140 starting from which a cylindrical enclosure 141 extends defining a visible outer surface 142. The outside diameter of the envelope at the external surface 142 is substantially or perfectly identical to the outside diameter of the body 111 and the collar 121, such that the cap extends along the prolongation of the body 111 and the collar 121 without creating any discontinuity.

Obviously, the shape of the envelope is not necessarily perfectly cylindrical.

As can be seen in Figures 2 and 4a, the shape of the sample dispenser is generally cylindrical or tubular. The cap 14 comprises a lower end 143 that can stop in contact with the collar 121. A tight friction contact can also be made between the inside surface of the enclosure 141 and the bushing 123 of the ring 12 to make a removable attachment of the cap 14 onto the ring 12.

According to the invention, the substrate 2 is made from a transparent flexible sheet. The substrate 2 comprises a front face, a back face, a lower edge 20, two side edges 21 and an upper edge 22. The back face is preferably locally or entirely coated with an adhesive. The front face is provided with information applied through an arbitrary marking technique such as printing. The information may be in a wide variety of forms such as a décor, letters or numbers. These are non-limitative examples. The information 24 may possibly be applied on the back face of the substrate. Thus, the substrate comprises covered areas consisting of information 24 and uncovered transparent areas 23 at which it is possible to see through the substrate, considering that it is transparent. According to the invention, this substrate 2 is applied onto the dispenser 1 with its back face in contact with the outer surface 112 and / or 142 of the dispenser 1. When the back face of the substrate 2 is covered with an adhesive, the substrate is attached onto the dispenser using this adhesive. The back face of the substrate can

also be fixed onto the dispenser using other bonding techniques such as coating of an adhesive onto the dispenser or welding techniques by induction or ultrasound. However, it is preferable for the back face
5 of the substrate to be coated or covered at least locally and advantageously entirely with an adhesive. The substrate 2 can partly or entirely cover the external surface 112 or the external surface 142. The substrate 2 may even extend over part or all of the
10 surfaces 112 and 142 by covering the collar 121. In this case, the cap 14 is held in place on the ring 12 by the substrate 2 that connects the cap 14 to the reservoir 1. The substrate can then be used as a first security. However, in the embodiment shown in the
15 figures, the substrate 2 extends over part of the external surface 112 formed by the body 111 of the reservoir 11. The lower edge 20 is located close to the bottom 110 when the upper edge 22 is located close to the edge of the upper end 113. The lateral edges 21 can
20 overlap or their edges can be in contact, or they can be separated from each other. This depends on the width of the substrate 2 with respect to the diameter of the body 111.

Considering that the substrate 2 is transparent in
25 the uncovered area 23, the external surface 111 is visible at this location and through the substrate 2. On the other hand, the substrate is not visible or is only partially visible as a function of the nature of information 24. The general visual impression given by
30 the dispenser is that the information is placed directly on the dispenser without insertion in the

substrate. The user does not know that there is a substrate due to the fact that it is transparent and believes that the information is applied directly onto the external surface of the dispenser, as when using a printing technique.

If the reservoir is not made of a transparent or translucent glass, it would even be possible to see the fluid product in the reservoir through the transparent or translucent wall of the reservoir and the transparent substrate. The substrate may be coloured or tinted while remaining transparent. This may also be the case with an opaque reservoir.

If the external surface of the dispenser is not cylindrical, it would be possible for the substrate to be made with a heat shrinking material, such that the back face will match the complex shape of the external surface by the application of heat.